

Overview of the Course

The objective of this program is to provide a common platform for specialists working in precision, meso, micro and nano engineering industries and academic institutions as well as R&D organizations to come together for interaction and exchange of their ideas. The program also aims at networking of participant institutes/ organizations/ industries to systematically confront challenges in mutual areas of interest to advance manufacturing technology in these areas. The program continues to grow as a platform where manufacturers, researchers and academia gather to connect with the pace of innovation in manufacturing technology.

Course Contents:

Module A

- Mechanics of metal cutting
- Tool materials for precision machining
- Advanced machining process I & II

Module B

- Mechanics of precision machining
- Mechanics of grinding
- Material removal mechanisms
- Accuracy and machining on CNC machines
- Machinability of super alloys

Module C

- Advances in Precision Grinding
- Precision Grinding Processes
- Precision machining and manufacturing
- Lithography- MEMS Process
- Modeling of Machining Processes

Module D

- Cutting fluids, MQL and Nano lubricants
- Wear and Tool Life
- Bearings
- Gas Lubricated Bearings

Module E

- Advanced Machining Processes
- Modeling Optimization in Metal cutting-I & II
- Micro electro-Mechanical Systems (MEMS)



Professor V.C. Venkatesh has worked in seven universities in four countries. These are IIT Madras, India (16 years); NUS (8 years) and NTU (4 years, Singapore; UTM, Johor Bahru (7 years) and MMU, Melaka (2 years), Malaysia; and TTU, Cookeville, TN (6 years) and UNLV, Las Vegas (2018 continuing) USA. He has authored 280 papers of which 60% of them are in journals and four books. He is a Fellow of CIRP (French acronym for International Academy of Production Engineering, Fellow of SME (Society of Manufacturing Engineers, USA), and Fellow of American Society of Mechanical Engineers). He got his PhD from the Sorbonne (University of Paris) in 1963 and 20 years later was awarded the DSc from the University of Pierre and Marie Curie, Paris, France. He has supervised 23 PhDs, 16 in IIT Madras, 5 in Malaysia and 2 in USA and many Masters.

Who can participate?

This program is open to the Faculty, PG and Research students of Mechanical Engineering from various Institutes. Practicing Engineers from industries can also participate.

How to Register?

Stage-1: Web Portal Registration:

Visit <http://www.gian.iitkgp.ac.in/GREGN/index> and create login User ID and Password. Fill up the blank registration form and do web registration by Paying Rs.500/- online through Net Banking/Debit/Credit card. This provides the user with life time registration to enroll in any number of GIAN courses offered.

Stage-2: Course Registration:

Login to the GIAN portal with the user ID and Password already created in Stage 1. Click on Course Registration option at the top of Registration form. Select the Course titled "Precision Manufacturing" from the list and click on save option. Complete your registration by clicking on 'Confirm Course'.

REGISTRATION FEE:

Faculty (Internal & External) & Scientists from R&D Labs	Rs. 5,000/-
Persons working in Industry/ Consultancy firms	Rs. 10,000/-
Students & Research Scholars <ul style="list-style-type: none">• Without award of Grade• With award of Grade	Rs. 1,500/- Rs. 2,000/-
Students from abroad	\$ 100

The Registration fee includes instructional materials, tutorials, laboratory and computer use and free internet facility. The participants from academic/research institutes and Industry will be provided with boarding and lodging on additional payment of Rs. 4,000/- in Visitors Block on sharing basis. Students & Research Scholars will be provided with boarding and lodging in Institute Hostels on additional payment of Rs. 2,000/-.

Selection and Mode of Payment

Selected candidates will be intimated through e-mail. They have to remit the necessary course fee to the Bank as per the details given below.

Outstation participants requiring Lodging and Boarding facilities have to pay Rs. 4,000/- (academic/research institutes and Industry persons) **or 2,000/-** (Students & Research Scholars) **in addition to the course fee.**

Account Name	GIAN NITW
Account No.	62447453600
Bank	State Bank of India
Branch	REC Warangal(NIT Campus)
Branch Code	20149
IFSC	SBIN0020149
MICR Code	506002030
SWIFT Code	SBININBBH14

Candidates registering early will be given preference in short listing process.

For any queries regarding registration of the course and accommodation, please contact the Course Coordinators:

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About GIAN Course

MHRD, Govt. of India has launched an innovative program titled “Global Initiative of Academic Networks (GIAN)” in higher Education, in order to garner the best international experience. As part of this, internationally renowned Academicians and Scientists are invited to augment the Country’s academic resources, accelerate the pace of quality reforms and elevate India’s scientific and technological capacity to global excellence.

About the Institute and Warangal

National Institute of Technology, Warangal (NITW) formerly known as RECW is the first among seventeen RECs set up in 1959. Over the years, the Institute has established itself as a premier Institution in imparting technical education of a very high standard, leading to B. Tech, M. Tech and Ph.D. programmes in Science and Engineering streams.

Warangal is known for its rich historical and cultural heritage. It is situated at a distance of 140 km from Hyderabad. Warangal is well connected by rail and road. National Institute of Technology, Warangal campus is 2 km away from Kazipet railway station and 12 km away from Warangal railway station.

ABOUT THE DEPARTMENT

The Department of Mechanical Engineering was established in the year 1959. The Department offers one UG program and seven PG programs. The Department has experienced faculty and well-established laboratories. The Department has liaison with reputed industries and R&D organizations like NFTDC, BHEL, DMRL, DRDL, ARCI, Praga Tools GTRE, etc. Presently the Department is handling several R&D projects and consultancy. The Department has been recognized as QIP centre for M. Tech and Ph.D.



**A Five Day
GIAN Course on**

Precision Manufacturing

March 18 – 22, 2019

Call for Registration and Participation

International Faculty

Prof. V. C. Venkatesh

Department of Mechanical Engineering,
University of Nevada Las Vegas, USA

Course Coordinators

Dr. P. Subhash Chandra Bose

Prof. N. Selvaraj

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